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REMARKS ON THIRTY-TWO CASES OF PULMONARY GANGRENE.¹

BY THOMAS W. HUNTINGTON, M. D.

THE cases which form the subject of this paper were compiled from the Massachusetts General Hospital records, and were all of their kind reported from 1857 to 1875 inclusive.

The principal motive prompting to this work was a desire to learn more accurately, if possible, what is the probable course and termination of the disease. There seems to be an impression very generally prevalent that the disease, once fairly established, is progressive in its tendency, and that the lung refuses to set up the line of demarkation so essential to repair and cure.

Niemeyer, in writing of this subject, states that recovery "is a very rare event indeed."

Hertz, in his treatise, published in Ziemssen's *Encyclopædia*, is rather more liberal, as he remarks, "The prognosis is not absolutely unfavorable, as was once supposed."

Considering the urgent and most distressing symptoms of pulmonary gangrene, unmistakable alike to patient and attendant, it is not wonderful that such an opinion arose, even if it can be shown to be quite erroneous. It is certainly true that but few and meagre collections of such cases have been made, from which alone an accurate judgment can be formed. My own impression, derived from the cases under consideration, is that a very large proportion of uncomplicated cases terminate favorably.

Before proceeding further it is proper to mention the two forms of the disease ordinarily described, and to indicate that which in this connection is more interesting. Diffuse gangrene, involving from the beginning an extended tract of lung tissue, is by far the rarer form, and from its nature runs an inevitably fatal course. Cases coming under this head must clearly be discriminated against in estimating the results in the more common and less serious circumscribed gangrene, wherein a limited portion or portions of tissue are implicated, admitting on theory at least the possibility of repair.

¹ Graduation Thesis at the Harvard Medical School, in June, 1876.

Another preliminary statement suggests itself regarding the records of the cases, many of which for various reasons are found to be defective in important details. Thus, in the records of the thirty-two cases the matter of *hereditary tendency* is entirely ignored in twenty-one. In five there was a history of phthisis, in one of pulmonary gangrene, and in five the "family history" was reported as good. With regard to *habits*, a very important item as bearing upon causation, there is no record whatever in twenty-six cases, while in six the free use of liquor is noted. Considering the class of patients which forms a large majority of the cases, it is safe to assume that intemperance formed an element in very many of them, so that any deductions from the above data would be quite valueless.

Sex. — Of the thirty-two patients twenty-four were males and eight females. It is an interesting fact that in the same number of cases collected by Lebert and mentioned by Hertz, twenty-two were males and ten females.

Age. — The youngest patient was ten years of age; disease complicated with phthisis and empyema; result fatal. The youngest patients without complication were two aged eighteen. Both were discharged "much relieved," and with a prospect of permanent recovery. The oldest was sixty-four, the disease following croupous pneumonia, diffuse; result fatal. The next oldest were two aged fifty. In one the gangrene was diffuse, following pneumonia; result fatal. The other was a well-marked case of circumscribed gangrene. Patient was discharged, well.

The following is a division of ages according to decades:—

Between	1 and 10	there was	1 case.
"	10 and 20	there were	3 cases.
"	20 and 30	there were	9 cases.
"	30 and 40	there were	12 cases.
"	40 and 50	there were	4 cases.
"	50 and 60	there were	2 cases.
"	60 and 70	there was	1 case.

Total . . . 32 cases.

Employment. — The twenty-four males were distributed among eight different callings. By far the greater number were inevitably subjected to extremes of temperature and to wet. Thus, twelve were common laborers, four were seamen, and the remaining eight were variously occupied. The eight females represented but three different callings: five were domestics, two were housewives, and one was a seamstress. In brief, twenty-one of the thirty-two cases can be said to have had exposure as an element in causation.

Duration. — No accurate statements can be made upon this topic, except in those cases which terminated favorably or fatally, while under observation, as there are no subsequent data concerning those discharged

during the progress of the disease. Of the eleven fatal cases, the longest was in progress ten months, the shortest one month; average duration, 3.3 months. Of the seven cases of recovery four had a duration of seven months, two of three months, and one of four months; average duration 5.3 months.

Causation. — Little remains to be said upon this topic further than the general statements made under "employment" and "habits." It is interesting, however, to note that of the eleven fatal cases, in seven the disease was preceded by croupous pneumonia, in one by cancer of œsophagus (gangrene caused by mechanical pressure), and in one by empyema and phthisis. In both the last cases death was due in large part to the original disease.

Results. — Seven cases were discharged well; six much relieved (these with proper care and favorable circumstances doubtless proceeded to ultimate recovery); three cases were temporarily relieved; five were not relieved, two of which were in the hospital but for a brief period, and were not treated; eleven cases terminated fatally. Several of the above statements will be subject to further comment under the following topic: —

COMPLICATIONS.	
Cases with complication	10
Cases without complication	22
Phthisis as a complication occurred in	8
Empyema " " "	1
Cancer of œsophagus as a complication occurred in	1

In seven of the cases without complication gangrene followed pneumonia, and was diffuse. Termination fatal.

Leaving the latter out of the discussion, according to the original plan, the following statement can be made. Of the fifteen cases without complication five were well, six much relieved, one was relieved temporarily, three not relieved, none died. In other words, among the cases of *circumscribed gangrene* there were eleven favorable and four unfavorable terminations.

On the other hand, of the complicated cases four died, two were not relieved, two were temporarily relieved, and two were cured of gangrene. That is, two terminated favorably so far as the disease under consideration is concerned, and eight terminated unfavorably.

Summary of results and complications: —

CASES WITHOUT COMPLICATIONS.	
Terminated favorably	73.3+ per cent.
Terminated unfavorably	26.6+ per cent.
CASES WITH COMPLICATIONS.	
Terminated favorably	20 per cent.
Terminated unfavorably	80 per cent.

Below is appended an account of two cases of gangrene exemplifying numerous particulars which it has not been convenient to collect for general discussion.

Thomas McG., aged thirty-seven, was born in Ireland and lived in Boston. Employed as a cook. Entered hospital July 16, 1864. Case was reported as follows: two months ago he caught cold without known exposure, and began to cough. Cough soon became very severe, with profuse expectoration. Seven weeks ago he felt a sharp, darting pain under the right breast, which has been persistent. During the past month has had one severe and two slight hæmoptyses. Is much emaciated. Appetite poor. Countenance distressed. Skin pale. Has had dyspnœa on slight exertion, and quite profuse diarrhœa for several days.

Expectoration consists of about three ounces of dark, muco-purulent matter, with a little blood. Odor gangrenous, with perceptible odor of wet mortar.

Physical Examination. — Dullness below right clavicle. Respiration harsh and jerking in right upper front, with occasional sonorous râles.

From this time on there was constant increase of the urgency of all the symptoms. Cough more frequent and harassing. Expectoration more profuse and fœtid, with exhausting diarrhœa, and finally great prostration.

August 14th. Nearly one month after entrance the following record was made: Dullness over entire front and back of chest. In right upper front abundant crepitation, with occasional bronchial respiration, and same signs in right back.

Patient continued to sink, and died September 27th.

There is no record of a chill at any time after entrance, and no thermometric observations were made.

Autopsy. — The right lung exhibited a large amount of tubercular deposit, especially in upper half of right lobe, where were numerous cavities, small and circumscribed. In the upper part of right lower lobe was a small cavity, which may have been gangrenous, but this was not determined accurately. The left lung was free from tubercle. Very near the base was a cavity the size of an ordinary peach, which was undoubtedly gangrenous, emitting an exceedingly fœtid odor, and lined with soft shreds of dead lung tissue.

From the above it is apparent that many of the principal features of the case were consequent upon the presence of tubercular disease, and that the termination was dependent no less upon this than upon the gangrenous process, which was clearly a minor element in the case.

The second case at the outset presented features not less alarming in character than the first, but its more fortunate termination lends to it a livelier interest.

Edward C. was born in Ireland and lives in Boston. Employed as a longshoreman. Entered hospital October 27, 1875. For several years has used a large amount of liquor, and has led an irregular life.

Has been much exposed to wet and cold, often working all night in the rain. At the same time he took but little and insufficient food, depending mainly upon alcoholic stimulus for support.

Had had occasional cough for two or three years, with slight expectoration, which attracted little attention. For three months previous to entrance had pain in right lower chest, increasing in severity. Cough also became more frequent and harassing. Sputa at first consisted of aerated mucus, changing to dark yellow or gray, and were very abundant. About a month ago sputa began to omit an offensive odor (described as rotten), often causing nausea and vomiting, occasionally tinged with blood. Has lost weight and strength very rapidly.

October 27th. *Present Condition.* — Weight one hundred and fourteen pounds, normal weight being one hundred and fifty pounds. Face flushed, countenance haggard, with an expression of anxiety. Skin hot. Great dyspnoea on slight exertion. Cough very urgent, causing sharp pain in right side. Expectoration thick and opaque, often to the amount of a pint and a half in twenty-four hours. Color almost black, with here and there streaks of blood. Taste described as hot and salty. Odor of sputa and breath was extremely offensive and penetrating, so that patient was at once transferred to an isolating ward. Bowels irregular, with occasional diarrhoea. Appetite very poor. Sleep disturbed. Pulse 120, very feeble. Temperature 102.5°. The general condition of the patient was that of prostration amounting almost to collapse.

Physical Examination. — Condition of patient was such as to admit of no thorough examination until a week after entrance, when there was found "crackling" in right supra-spinous fossa, and amphoric respiration over right upper back. Four days later the record was as follows: Flatness in right supra-spinous fossa; dullness, subcrepitant and sonorous râles, and metallic respiration over right front. Respiration amphoric over upper right back. No abnormal signs over lower backs.

For two weeks patient continued about as on entrance. Temperature ranged from 100° to 104°. Frequent slight hæmoptyses. Twelve days after entrance had a severe chill in morning, lasting nearly an hour. This was followed for several days with occasional intervals of chilliness and subsequent rise of temperature.

One month after entrance, reported generally better; cough and expectoration less, but had a severe chill in the evening. The old symptoms returned, and two days later the patient raised four or five ounces of blood and gangrenous *débris*. At the same time he had profuse diarrhoea, persisting for several days. This was apparently attended with relief, as the amount of sputa and the fœtor gradually diminished.

Two months after entrance physical examination showed marked improvement in the condition of right lung. There was, however, flatness in right supra-spinous fossa, with blowing inspiration and expira-

tion. There was no râle, but an occasional gurgle was heard. Good resonance over right upper front.

From this time on there was a gradual but uninterrupted improvement. Sputa became less profuse, lighter colored, without blood, and without odor, and finally disappeared entirely. Signs in chest slowly cleared up, latterly being confined to a small area over centre of right scapula, and before his discharge could not be detected at all. Cough disappeared with the physical signs. Diarrhœa persisted quite late in the history of the case, recurring frequently, but was usually attended with relief rather than distress, and was only checked as it became exhaustive.

Patient remained in the hospital four months, being discharged February 29th. During the latter part of this time he gained flesh and strength very rapidly. His weight at the time of discharge was one hundred and sixty-four pounds, showing a net gain of fifty pounds. As he left the hospital his appearance was that of a robust and healthy man.

Treatment. — No regular line of medication was adopted as bearing directly upon the pulmonary lesion. Symptoms as they arose were alleviated as far as possible by the proper remedies. It is worth while, however, to mention the use of carbolic acid internally as a disinfectant. One minim was exhibited every three hours in a proper menstruum, with very apparent diminution of the gangrenous odor of exhalations, and with proportionate relief to both the patient and the attendants. In this connection too great importance cannot be attached to the nutrition and hygienic surroundings of the patient. Thorough rest, an abundant supply of warm, pure air and good food, and long-continued, never-tiring care and nursing are elements in treatment without which the chances of recovery diminish materially or disappear altogether.

IDIOPATHIC GLOSSITIS.¹

BY E. H. BRADFORD, M. D.

A YOUNG man aged twenty, of an average healthy appearance, presented himself for treatment, complaining of a swelling of the tongue. The night before, his tongue began suddenly to enlarge without any known cause. There had been no injury to the tongue, and the patient had been taking no medicine. Two leeches were applied to the tongue on the advice of an apothecary, and ice was used.

On examination the tongue was seen to be swollen to more than double its normal thickness on the right of the median line; the swelling was greatest about two inches from the tip. Some swelling was to be seen also on the left side, and the edges seemed thicker than usual.

¹ The accompanying case may serve as a companion to the one published in a late number of the JOURNAL (September 7, 1876).

The surface of the tongue was normal, with the exception of a few excoriations caused apparently by the friction of the teeth. The gums were healthy and nothing unusual was to be seen on the fauces or pharynx. The mucous membrane beneath the tongue, covering the upper surface of the sub-lingual gland, appeared slightly swelled. There was no enlargement of the glands of the neck. Speech was not interfered with, and there was no pain or tenderness. The tumor, however, was quite hard and felt like a circumscribed lump when taken between the thumb and forefinger.

The patient said that a year before his tongue became suddenly large in a similar way, the swelling commencing at night and increasing so that he could breathe only through his nostrils and feared he would be suffocated. On medical advice leeches were applied to the tongue and ice was used afterwards, and in a week or ten days the tongue assumed its normal size. The physician in charge, he claims, attributed the tumor to smoking.

The second attack passed off without any great trouble. The swelling diminished the next day under no treatment except ice, and a week later it had entirely disappeared.

On cross-questioning it was learned that the patient had had a chancre a few years previous, but no specific symptoms could be ascertained.

Beside the authors quoted by Dr. Wingate in connection with his case, a few others mention idiopathic glossitis. In Holmes's *System of Surgery* (article *Acute Glossitis*), Mr. S. Cooper is quoted as mentioning that the disease may occur spontaneously and without any apparent cause. Mr. Holmes Coote cites four cases, happening in his practice, of sudden spontaneous enlargement of the tongue, all recovering perfectly in a week.

Mr. W. Fairlie Clark (*Diseases of Tongue*, page 104) says, "It is not uncommon to meet with a circumscribed induration in the substance of the tongue. The patient without having experienced any previous uneasiness becomes aware of a lump in the substance of his tongue."

Nine cases of severe idiopathic glossitis are quoted, incisions being made in almost all. Death occurred in one case.¹

A case is quoted from the *Dublin Hospital Reports*, iv. 43, showing that the disease may affect one side of the tongue, the other being only slightly or not at all enlarged.

¹ *Lancet*, 1828, page 16.

RECENT PROGRESS IN PATHOLOGY AND PATHOLOGICAL ANATOMY.¹

BY R. H. FITZ, M. D.

PATHOLOGICAL ANATOMY.

Infective Osteomyelitis and Periostitis. — Lücke has applied the term primary infective osteomyelitis and periostitis to an affection of the bones which Chassaignac first separated from other diseases of the bones, and to which he and later writers, French and German in particular, have applied various names. The diversity of these, their relation now to the local anatomical changes and again to the clinical features of the affection, but none calling attention to the essential peculiarity of the process, render excusable, even desirable, the application of a term which shall indicate more exactly the nature of the disease. Nearly all the authors agree upon the malignant course of this inflammation, the symptomatic resemblance of its clinical course at times to a severe typhoid fever, again to a pyæmia or an articular rheumatism, and its frequent fatal issue or termination with a separation of the epiphyses.

From the apparent primary local origin of the process and the not uncommon secondary changes in remote organs, from its clinical and anatomical resemblance to a pyæmia, the infective nature becomes evident; one where the source of the infection must be looked for in the bone-marrow or periosteum, not from a mucous membrane or a wounded surface. In two of Lücke's cases the presence of micrococci has also been ascertained, both in the primary and secondary alterations.

Eberth² presents additional evidence in favor of the infective nature of this disease. The patient, while feeling well, was suddenly seized with a chill, followed by prostration, pains in the left leg and elsewhere in the body where touched. Five days after the beginning of the sickness the patient was received into the hospital, his condition then rendering a positive diagnosis impossible, though it was thought probable that the case was one of septicæmia with pulmonary infarction. Death occurred on the same day. At the autopsy collections of pus were found beneath and about the periosteum of the left femur, phlebitis of a periosteal vein, purulent periostitis and synovitis of some of the bones of the foot, abscesses in the walls of the heart with pericarditis, and beginning abscesses in the lungs with pleurisy. But few apparent micrococci were seen in the blood, while collections of them were found within and in the vicinity of the cardiac and pulmonary abscesses. Emboli of fat drops were likewise found in the pulmonary vessels.

¹ Concluded from page 467.² Virchow's Archiv, 1875, lxx. 341.

The frequent occurrence of fat and micrococci in the same vessel suggested a common source of these emboli, which was thought to be the periosteal abscess on the femur. With regard to the origin of the process Eberth agrees with Lücke in considering that local disturbances of circulation result from an injury and a chilling, and that injurious substances which have entered the blood (in this instance the micrococci) become stagnant and develop, and thence the secondary depositions.¹

A second case is reported, where no micrococci were found, but where the clinical course was so similar that it too was regarded as a case of infective periostitis.

A third case is published by Friedmann² where the patient, a boy previously healthy, fell some weeks before his illness and is said to have complained of pain in his leg; he was able to go to school in the mean time without manifesting any evidence of disease.

A sudden pain then appeared in his left knee, which obliged him to go to bed, where he was seen two days later by a physician, who regarded the case as one of beginning coxitis. Six days later a continuous high fever began without any premonitory chill, and the disease pursued a typhoidal course, with inflammation of the parotids but without enlargement of the spleen or symptoms of intestinal disturbance. On the tenth day of the disease a slight œdematous swelling was evident in the upper third of the thigh and at the knees, with indistinct fluctuation and circumscribed redness over the right patella. Three days later a series of small subcutaneous abscesses were evident beneath the skin of the abdomen, and the child then died.

Almost the entire marrow in the left femur was in a state of suppurative inflammation; there was a commencing separation of the epiphyses and periosteal abscesses, with pus in the knee and hip joints. Ichorous pleurisy and pericarditis were likewise present, engorgement and yellow hepatization of the lungs, but neither abscesses nor fat embolism in them. Neither in the marrow nor in the sub-periosteal abscesses could anything be found resembling bacteria. The resemblance of this case to one of malignant acute rheumatism was very strong, but to be distinguished by the pain from pressure upon the shaft of the femur, showing a local process there early in the disease, before the evidence of any affection elsewhere, and finally by the small number of joints affected and by the youth of the patient.

Senator³ adds a fourth case, admitted to the hospital as suffering

¹ The experiments of Weissgerber and Perls (*Archiv für experimentelle Pathologie und Pharmakologie*, 1876, vi. 139) are interesting in this connection. Small particles of aniline blue and bacteria were injected into the blood of animals before and after the circulation through the renal vein was obstructed. It was not found that any greater accumulation took place in the kidney operated upon than in the other.

² *Berliner klinische Wochenschrift*, 1876, vi. 73.

³ *Berliner klinische Wochenschrift*, 1876, vii. 89.

from typhoid fever, the patient, a girl of fifteen, remaining under his charge there till her death, fifteen days later. The diagnosis of typhoid fever made at the outset was adhered to throughout, the symptoms being high fever, mental disturbance, enlarged spleen, diarrhoea, gurgling, bronchial catarrh, and bed-sore. There was no distinct roseola. She complained of pain in the right foot, where there was a slight swelling, but it was thought probable that she had injured herself during her delirium. Pericarditis and pleurisy were found at the autopsy, also embolic nodules in the lungs and kidneys, pneumonia, an enlarged spleen, but no enlargement of Peyer's patches or of the mesenteric glands. There was a sub-periosteal abscess at the lower end of the tibia and a loosening of the epiphysis. The marrow throughout the lower portion of the tibia was infiltrated with pus. The pus contained numerous fat drops, but neither micrococci nor bacteria.

Attention is called to the necessity of bearing in mind the local disturbances at the outset of the disease preceding the typhoidal symptoms, their cause and development. A full history of the case, which should include the relation of the general to the local symptoms, particularly as to sequence, would do much towards preventing a mistake in diagnosis, especially a confounding this disease with typhoid fever. At the same time additional care is necessary from the fact that the osteomyelitis may be secondary in typhoid fever, just as the typhoidal symptoms are secondary in infective osteomyelitis.

Organization of the Red Thrombus. — Baumgarten¹ has studied the changes taking place in a vessel, artery or vein, after a double ligature has been placed about it. A cellular new-formation first develops from the intima of the ligated portion as well as immediately above and below the ligatures. That this process might take place it is unnecessary that a blood clot should be present, and the blood within the portion of the vessel separated from the circulation may even remain fluid for a fortnight. The folds of the inner elastic layer become filled with large and small nuclei lying beneath the elevated unbroken endothelium. As these cells increase in number a concentric diminution in the volume of the vessel takes place, those lying nearest the canal becoming of an elongated spindle shape, forming concentric layers resembling a newly formed muscular coat, yet giving no reaction with picric acid. The cells lying more externally are stellate, and form a loose, irregular net-work. As this growth increases, the thrombus diminishes without any evidence of cell proliferation within it, nor is there any evidence of the new formation of blood-vessels in this tissue. In those parts where the middle and inner coats are ruptured by the ligatures, a vascular granulation tissue becomes developed from the pre-existing elements of the external coat and extends towards the thrombus,

¹ Centralblatt für die medicinischen Wissenschaften, 1876, xxxiv. 593.

which yields as before. The vessels of this granulation tissue often become continuous with those of the surrounding connective tissue. Eventually lateral branches arise which penetrate the middle coat and anastomose with the vessels near it.

The vessel thus becomes completely filled, and the origin of the vascular tissue could be demonstrated on longitudinal sections also. The writer believes that the lateral growth arises from the endothelium of the inner coat, because no other cells exist there which can serve as a matrix, provided the migratory cells are excluded. No progressive changes were observed in the white corpuscles of the thrombus, nor was any evidence found of their perforating the endothelium and becoming multiplied beneath it. The first products of the new-formation were endothelial in character, and from them to the large spindle cells were numerous transitional forms. Further, by irritation of the endothelial layer a growth was produced within forty-eight hours, occupying its place and presenting every external evidence of cubic endothelium. The possibility of a progressive change in this layer is thus evident. The frequent occurrence of multi-nucleated endothelial forms of cells offers an additional ground in favor of the view asserted. The writer concludes that the so-called organization of the red thrombus is the result of two independent processes: a growth of the endothelium of the vessel, and tissue growth from without entering at the part where the ligatures are applied. In the latter almost solely the new formation of vessels takes place. The presence of a blood clot is unnecessary, for the process described may occur in its absence.

Riedel¹ also asserts from numerous experiments that the obliteration of the artery after ligature is due to a proliferation of the endothelium. At the same time, according to his observations, there generally occurs a new formation of connective tissue outside the elastic membrane, which perforates the latter in spots and becomes united with the tissue proceeding from the endothelium. Thus a sort of cavernous tissue arises which has an independent vascular system towards the media, and eventually becomes converted into a cicatricial tissue.

When a double ligature has been applied, the presence of blood is unnecessary for this process to take place. When a single ligature is applied, the obliteration of the vessel seems to take place in the same way, though the growth of the endothelium is masked, perhaps impeded, by the fibrine present.

Lumbrici discharged from the Umbilicus. — Berner² records the escape of four living round-worms from an abscess developed without special symptoms in the umbilicus of a child four years of age. The

¹ Deutsche Zeitschrift für Chirurgie, vi. 459; Centralblatt für die medicinischen Wissenschaften, 1876, xxxvi. 653.

² Bayerisches Intelligenz-Blatt, 1876, xxiii.; Centralblatt für die medicinischen Wissenschaften, 1876, xxxvi. 655.

opening closed after a few days. It was supposed that the omphalo-enteric duct was still patent, and that a diverticulum was present at its entrance into the intestine. The worms, having entered the latter, had made their way through the remains of the vitelline duct to the navel.

Gall-Stones in the Urinary Bladder. — The presence of several calculi in the urinary bladder of a female was ascertained by Güterbock,¹ and their removal effected by lithotripsy. The chemical examination of these by Schultzen and Liebreich showed them to be composed mainly of cholesterine and biliary coloring matters with a crust of uric acid. There were three ways only by which such a calculus could have made its appearance there. It must have been introduced from without, have been formed in the urinary passages, or, having been formed in the gall bladder, been transported thence into the urinary bladder, directly or indirectly, through pathological processes. The first method was eliminated by the size of the calculus, which was that of a walnut. The doubtful occurrence of cholesterine in the urine, or its occurrence under conditions (pregnancy and pyelitis) which were not present in this case, eliminates the second method. With regard to the third possibility the examination of the patient gave no light. Hitherto only two cases of gall-stones in the urinary bladder have been recorded, in only one of which was the manner of entrance made clear by the autopsy. A cord was there found connecting the gall bladder with the urinary bladder, the lower portion formed from the urachus, the upper from the gall bladder.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

A. L. MASON, M. D., SECRETARY.

MAY 27, 1876. *Ovariectomy; Recovery.* — DR. D. W. CHEEVER reported a third successful case of ovariectomy and showed the specimen. The patient was a very large, strong woman, fifty years old. The pelvis was large, and she had borne two children. The tumor was of fifteen years' duration. The patient first came under Dr. Cheever's observation in May, 1875, when she was much oppressed by the size of the tumor, which interfered greatly with the respiration and digestion. She was tapped in July, 1875, and a large quantity of fluid was withdrawn. After the tapping there was considerable shrinking of the cyst, which was thought to be a single sac, with the pedicle in the left groin. The patient recuperated well, and traveled in the summer, but began to be inconvenienced again in the autumn. In the spring, as the cyst had refilled and the patient was in very good condition and of moderate size, an operation was advised and was performed on March 26, 1876.

The tumor was not very large, and consisted of a single cyst, which contained eighteen or twenty pints of fluid. There were no adhesions. The opening into the peritoneal cavity was large enough to admit the hand only,

¹ Virchow's Archiv, 1876, lxxi. 273.

and was open but ten or twelve minutes. The pedicle was short, so the clamp was applied across the base of the sac, and the surface rubbed with the tincture of the perchloride of iron, the wound brought together, and the abdomen wrapped in cotton batting. No antiseptics were used. There was little shock; the pulse never rose to 100, nor the temperature higher than 101°. There was no vomiting, but some colic. The bowels moved about the fifteenth day, and the clamp remained until the twentieth day. The water was drawn as often as necessary. The part of the sac which was left behind at first secreted the original fluid, which in forty-eight hours became pus. The wound cicatrized slowly, but at the time of the report was nearly well.

Dr. Cheever thought that the previous tapping gave the patient a better chance, and that the method of applying the clamp was superior to that of applying ligatures and dropping them back. He mentioned a previous case in which a ligature had remained eleven months, and then had come away by the rectum.

Dr. Cheever stated that he had opened the abdomen, for the removal of abdominal tumors, twelve times; in two cases at the City Hospital, in 1865 and 1866, for ovarian tumors, with fatal result; since January, 1873, in private practice, in ten cases; five of which were simple ovarian cysts, with three recoveries. Of the other five cases, one was complicated with pelvic abscess; one with ruptured and collapsed cysts, with ascites; and three were not ovarian; one each of cancer, of fibro-cyst of uterus, and of sarcoma. The last recovered.

DR. CHADWICK remarked that most of the cysts reported as occurring in this vicinity were single, whereas in Europe multiple cysts were more frequently seen.

Lister's Gauze Dressing.—DR. BRADFORD showed a specimen, and said Lister's antiseptic gauze dressing, from a description, would appear to be quite a complicated matter, but it does not seem so when seen applied. The gauze is furnished among the other hospital supplies, and is used very much as an ordinary cloth compress would be. The spray is an inconvenience, but, according to the Edinburgh surgeons, a necessary one, if it is admitted that the access of air to a wound is or may be injurious. Mr. Lister's results have been quite generally made known in the journals, but one fact is usually overlooked by critics, namely, that the most remarkable success is not in amputations, excision of tumors, etc., but in the treatment of psoas and lumbar abscesses, and in affections of the joints; these are incised without hesitation by the surgeons of Mr. Lister's school, with no injurious results. Though the antiseptic gauze is now used with success in most of the medical centres in Europe, it has not been thoroughly tried in this country, owing probably to a belief that it is quite a complicated matter. It is, however, much less so than is ordinarily thought. The gauze can be made by any apothecary or imported at a moderate expense. The only difficulty about the spray is that it requires one additional assistant, which is no greater objection than could be urged against the use of ether.

DR. J. B. AYER and DR. CHADWICK said that they were much impressed in Edinburgh by the good results of the antiseptic dressing. Dr. Chadwick

mentioned the favorable report by Mr. Callender of cases which were treated without the antiseptic dressing, suggesting the idea that the good results of Mr. Lister might be due to the great care taken as well as to the carbolic acid.

Strabismus. — DR. B. JOY JEFFRIES remarked on the operation for squint that section of the recti tendons is done to relieve a deformity, or to restore binocular vision. This latter cannot be done unless the oblique muscles act normally, to retain the parallelism of the meridians. The necessity of this and the action of the obliqui were explained by diagrams and a model. Illustrations were also shown of the position and inclinations of the double images in all the forms of ocular paralysis. The vast majority of the cases of convergent squint, which we have mostly to deal with, is dependent on hypermetropia, caused by the eyeball being congenitally too short in its antero-posterior diameter. The effect of this was explained on the blackboard, namely, the call for a greater change in the crystalline lens in accommodation, and hence greater and unnatural action of the ciliary muscle. The forced association of the muscular action of accommodation, and the internal recti in convergence, was dwelt on at length, and how this led directly to convergent squint as the patient's readiest relief from the annoying double images, and hence imperfect vision was explained. The necessity for glasses in the hypermetropic person, and their relief of the fatigue of the eye from over-exertion of the ciliary muscles, were insisted on and made evident, as also the equal necessity of properly-adjusted glasses after squint operation in over-sighted persons.

Next the call for accurate binocular vision was pointed out, and the necessity for the two eyes being enabled by the operation to focus on corresponding portions of the retina images of as near as possible equal size. It was explained that as soon as alternate squint in the child became changed to a fixed squint in either eye, the visual power in this then disused eye would at once commence to deteriorate and go steadily on through life, till use of it was practically lost. Hence the constant reminder from the ophthalmic surgeon of the necessity of operating on squinting eyes, as by the restoration of binocular vision alone can vision be retained or regained. How vision is lost in a non-used eye is difficult to explain, as the retina will retain its full power of receiving and transmitting perceptions many years, behind an opaque crystalline lens.

That squint is not a monocular trouble was long ago proved by its cure when only the non-squinting eye was operated on. The natural necessity, therefore, of an operation being divided between the two eyes, and the better resultant effect, was explained on the blackboard. The advantages the internal recti muscles thereby gained in their joint action was particularly dwelt upon and made evident. Here the great difficulties of the ophthalmic surgeon begin. He can cure the squint readily and at once, but the child, years after, returns to him an adult with a worse deformity, namely, divergent squint, not so easily relieved by the operation for bringing forward the insertion of the tendon. Therefore, in spite of the request of the family physician, or of the patient's parents or guardians, we must, coarsely only, correct the hypermetropic squint in the child, and subsequently relieve it entirely by a second, or, if necessary, by a third operation, requiring meantime the use of proper correcting glasses.

The dynamics of the ocular muscles have grown to be almost a special study within the specialty, and a thorough practical knowledge of these is requisite to enable the surgeon to operate intelligently as well as skillfully.

DR. D. HUNT said that Dr. Jeffries's remarks left nothing to be said, as far as the popular exposition of the subject of squint is concerned, but that the diagrams reminded him of an historical and a physiological point of some interest. First, as to the lower diagram, copied from Reute; he found an idea of a like diagram in the Anatomy of Eustachius (1716). It was this diagram, in which six muscles were described, that directed Dr. Hunt's attention to an error made by H. Schrön, of Jena, in Band xx., Abtheilung 1, of Graefe's Archives. Speaking of the operation for squint before Dieffenbach, Dr. Schrön says of Taylor, the famous quack oculist of the previous century, "He ascribed six muscles to the eye, while generally it was held with Galen, from investigations made on the eyes of oxen, that there were seven. In the works of Willis, edited by Blasius in 1682, is found a correct description of the muscles of the eye; also in Cowper's Anatomy, published in 1694. Taylor was born in 1708; thus a correct description had been published twenty-six years before he saw the light; besides these authors, Eustachius, Albinus, Morgagni, surely representative authors, all give six muscles as the proper number. Still further proof is afforded by the fact that Zinn (1755), in his *Descriptio Oculi Humani*, does not refer to Taylor in speaking of the muscles of the eye, but mentions him in connection with the nerves. From all this it is concluded that Taylor on this point, as in regard to most others, dealt more in pilfered facts than in the results of independent research. Second, the upper diagram recalls the interesting points, lately made by Professor Merkel, of Rostock, in the *Graefe-Saemisch Handbuch der Augenheilkunde*, as to the check ligaments of the eyeball, regarded as a joint; we know the check arrangements of different joints besides those furnished by their structure. Professor Merkel sees in the bands of connective tissue that extend from the muscles to the walls of the orbit such an arrangement for the eye; all the recti muscles have such bands, but, of the oblique muscles, only the superior is supplied with them; however, there are two sets, one before and one after the muscle passes through the pulley. By experiment it is demonstrated that the set of bands passing from the muscle behind the pulley serves as the check to the force exerted by the superior oblique, while those bands anterior to the pulley serve as checks to the action of the inferior oblique.

In answer to Dr. H. P. Bowditch, Dr. Jeffries said that we could learn to disassociate, to a certain extent, accommodation and convergence, and in that way only could a hypermetropic person see objects at a distance.

DR. AARON YOUNG read a paper on the use of oxygen gas in health and disease, which was supplementary to papers written by him in 1863 and 1875, in which he claimed to have made the discovery that oxygen was an antidote to chloroform asphyxia. Dr. Young discussed at length the value of oxygen in promoting the absorption and assimilation of fat, concluding that its action is upon inorganic material only, not upon the organized tissues of the body; that it is a vitalizing agent, in no way causing destructive combustion. Several cases of catarrh, capillary venous congestion, etc., were reported,

in which the tonic effect of inhalations of pure oxygen was beneficial. The gas was administered to the amount of four gallons at a sitting, repeated at intervals of a few days.

DR. J. B. AYER showed the aspirator of Coutereau, a modification of Dieulafoy's instrument. The capacity was an ounce and a half. Dr. Ayer had removed seven and a half pints of fluid from a chest with this instrument, and considered the slow withdrawal advantageous.

"OPIUM ANTIDOTES" EXPOSED.

IN the month of August last, Dr. George F. French, of Portland, Maine, was applied to by an opium-eater who asked his advice about a preparation advertised as a sure cure for the opium habit. Naturally being suspicious of such an article, he sent to the manufacturer, Mrs. J. A. Drollinger, of La Porte, Indiana, for a sample bottle. This was furnished, but, as we understand, the proprietress declined to give any information as to its composition, saying, however, that it "is harmless when taken as directed," and "does not contain opium in any form." Failing to be satisfied with this assertion, the doctor applied such chemical tests as he conveniently could and got the reactions of morphia. But to make assurance doubly sure, and to supplement and confirm the chemical test by a physiological one, he secretly administered a small dose of the "antidote" to a person who had a peculiar idiosyncrasy with reference to opium. The speedy result was, as had been anticipated, a manifestation of the symptoms which in this individual had always followed the exhibition of opium, namely, suffusion of the eyes, loss of voice, pain in the head, and insomnia. Dr. French then reported these facts to the Cumberland County Medical Society, which, at his suggestion, at once appointed a committee to further investigate the matter, and voted to bear the expense of whatever analyses might be necessary.

At the regular meeting of the society in September the committee presented the following

REPORT.

The committee to whom was assigned the duty of investigating the so-called "opium antidote" prepared by Mrs. J. A. Drollinger, of La Porte, Indiana, beg leave to report that a sample bottle of the article, which was obtained directly from the manufacturer, was sent to Dr. Edward R. Squibb, of Brooklyn, N. Y., for quantitative analysis. His onerous engagements rendered it impossible for him to conduct the investigation in person, but he sent the specimen to Messrs. Walz and Stillwell, chemists, New York, a firm which he thoroughly confides in and indorses. So deeply interested did he become in the project that he insisted upon bearing the expense of the analysis, in spite of the committee's expressed unwillingness to have him assume such a tax.

Walz and Stillwell report that "this sample is glycerine colored with aniline red, and containing in solution crystallized sulphate of morphia 1.383 per cent. by weight" — about seven grains to the ounce.

While this investigation was progressing, the committee found another alleged "opium antidote," prepared by "Dr. S. B. Collins, the Great Narcologist of the Age," likewise of La Porte, Indiana. A specimen of this was submitted to Dr. Henry Carmichael, Professor of Chemistry in Bowdoin College and Assayer of the State of Maine, who arrived at the following conclusions:—

"(1.) The opium antidote contains morphine.

"(2.) The morphine is combined with sulphuric acid.

"(3.) The sulphate of morphine amounts to 3.2 per cent., or fourteen grains to the ounce."

Dr. Walz says that he made an analysis of Collins's "antidote" in 1871, and found that it contained morphia, though he did not ascertain the quantity.

In conclusion, your committee respectfully suggest that the society take some action which will result in the wide dissemination of the information which has been acquired concerning these dangerous preparations.

FREDERICK HENRY GERRISH,
GEORGE F. FRENCH,
THOMAS A. FOSTER, } *Committee.*

The society instructed the committee to present their report to some prominent medical journal and, if it seemed to them advisable, to give the public warning of the danger to which it is exposed through the newspapers of the State. A vote of thanks was passed to Dr. Squibb for his generous assistance.

The importance of this exposure is too obvious to require any extensive comment on our part. Physicians now have something better than general reasons to offer their patients when warning them to shun such nostrums. The profession will not be insensible to the valuable service which the Cumberland County Medical Society has rendered it and the community, and it is to be hoped that other similar bodies will be encouraged to display equal enterprise and spirit. There is a great opportunity for our brethren in the region of La Porte to distinguish themselves as guardians of the health of the people, and we trust that they will not be slow to follow up the track so well opened by their fellows in Maine.

INTRODUCTORY ADDRESSES.

THE custom of delivering addresses at the opening of the medical term is, we think, falling into disrepute. Harvard abandoned the practice in 1871, when the new system was adopted, and this year two of the London hospitals, we believe, have done the same. We are inclined to think the change a wise one. Almost everything that can be said has been said, and little but repetition remains. To present platitudes effectively requires, if not a great, at all events a rare order of mind, and the time is going by when platitudes undisguised will pass muster. It is true that great professional questions are not scarce, but an introductory lecture is not for their discussion. What the student needs is advice; and this is best given by each professor, for his own branch, in the most matter-of-fact manner, without the aid of the flowers of rhetoric. The best plea for these lectures is their effect in exciting enthu-

siasm, and this is well argued by Mr. Allechin in his address at Westminster Hospital. "Frankly, I consider," says he, "that good does come from this custom; and though I dare not hope that my words this evening will justify this opinion, I can say that I have distinctly felt the influence for good of such addresses, not only in my first years as a student, but also more recently when I listened to the masterly oration delivered three years ago by Mr. Brudenell Carter, at St. George's Hospital. I am not one of those who would altogether deny in one's daily work the influence of what may be called enthusiasm, and there are few methods of so deeply stirring men's minds as spoken words. It is all very well to say that one can read an address in far less time than one can listen to it; but, apart from the possibility of the address not being read at all, it cannot be doubted but that it appeals to the brain in a far more forcible way when it comes from the author's lips, however feebly he may express his sentiments, and this in no way being affected by the intrinsic merit of the composition. I can trace in myself, and I firmly believe it to have been the case in others, the influence of the first words that I heard in a medical school, words that not infrequently urged me on to work, and encouraged me to fresh efforts, when I felt as all who work do feel, seldom or often, that the work before them is beyond their powers. And it is exactly at the outset of the student's career that such silent help is needed. Later, when he comes to see the exact position that his science takes in the wide field of knowledge, and that he as a doctor takes among his fellows, his enthusiasm has been chilled and snubbed down; happy he if it be not altogether extinguished. In the case of the boy, for little more is he very often, brought fresh from school, face to face with the many branches of study that constitute his first year's course, he is apt after a few weeks to look upon attaining a knowledge of them as almost hopeless. How valuable, then, that silent infelt influence that offers him the greatest of all rewards, — encouragement, — for want of which how many have perished. It is something that will rise superior to the sneering influence of those who, having gone through their initial stages, affect to decry the means which have helped them on. It is the influence of the first year that determines for good or ill the future career of many a student. Not only, however, to those who are entering on the medical profession, but to those who, having worn off the novelty, are anticipating struggles with those that they day by day come to look upon as sworn tormentors, and who are working now because they must work, the annual address comes as a spur, perchance a warning.

"So far, then, as the beginners and younger students are concerned, I can at least see that no harm is likely to come to them from listening to an 'introductory,' but rather, good. It should not be forgotten by those who advocate the abolition of our custom, that, though they are no longer susceptible to the influence of words of welcome, of encouragement, and advice, the boy from school, half bewildered by his novel surroundings and responsibilities, frequently values such help; and the man who enters on the study of our profession after a college life at one of our universities is in a wholly different mental attitude from the great majority of our first year's men. Within fair and legitimate limits I am of opinion that all means which may tend to ad-

vance the dignity of our calling in the eyes of our students are worthy to be pursued by us, their teachers. Compared with other professions ours is singularly free from ceremonial. I do not think we can afford to lose the little we possess."

There is truth in these views, but we doubt if the practical utility is of consequence. The scenes that have occurred of late years at London "introductory" have been far from edifying or suggestive of enthusiasm. An important lesson, and one that cannot be too early learned, is that medicine is a sober and painful calling. The very ones who are most influenced by enthusiasm are ultimately the most liable to discouragement. They are the ones who sing, —

"Man is useless too,
Be he saint or satyr;
Nothing 's new or true,
And — it does n't matter."

Let us glance at the glittering generalities of some of the other lecturers at the recent openings in England. Dr. Sawyer of Birmingham concludes as follows: "Look forward with confidence. Let the highest aims be yours. Let your minds be filled with a deep sense of your responsibility. Let your hearts ever grow in courage and in kindness. Strive to discover the true and to practice the good. In such a spirit labor to profit by opportunity, and then

'The secret consciousness
Of duty well performed; the public voice
Of praise that honors virtue and rewards it, —
All these are yours.'"

Mr. Evans, of Middlesex Hospital, speaks thus: "Give your skill and experience as freely to those who cannot afford to remunerate you as to those who can and do. Always bear in mind that you have to keep up your own reputation and that of the noble profession to which you belong; treat every one with whom you come in contact with the courtesy and kindness with which you would like to be treated yourself; and, even supposing that you do not meet with much substantial reward, you will yet have the satisfaction of feeling that you have done your duty fearlessly, honestly, and unselfishly."

True and good, every word of it; but would it not be better to tell the neophytes how little the substantial reward is likely to be?

Mr. Mason, of St. Thomas's, is quite glowing. "Let me add," he says, "in conclusion, to all who are now studying here, that whether your life be a success or a failure, I confidently hope you will never lose sight of the moral influence and discipline inculcated at this hospital. In life's campaign you will necessarily meet with many vicissitudes to impede your progress, and you will have to contend with and conquer numberless difficulties; yet, when the fiery fight is o'er, bear away the emblem of your victory, and you will, I feel sure, look back in your leisure moments with pride, reverence, and thankfulness to your Alma Mater, gratefully remembering the happy days you have spent here, and recognizing with intense satisfaction the many lifelong friendships that you have had the opportunity of forming."

We are growing cynical, perhaps, but after all is there not too much talk?

THE BOSTON DISPENSARY.

THE annual meeting of the Boston Dispensary Corporation was held October 17th. The summary of the reports is as follows: Number of new patients at the central office for the entire year ending September 30, 1876, 26,664. Of these, there were in the medical department, 17,893; surgical, 3431; dental, 3042; skin, 2122; nervous system, 176. Total number of visitors at the central office: medical, 51,557; surgical, 10,649; total, 61,806. The number of new patients treated in the districts was 19,927. The results were: discharged cured or relieved, 18,744; sent to hospitals or removed from the district, 663; died, 541; remaining under treatment, 108. Total number of cases at the central office and the districts, 46,591; number of cases of midwifery, 141; number of receipts, 109,245; average daily attendance during the year, 202.

The following appointments were made: Superintendent, William H. H. Hastings; surgeons, Thomas Waterman, Thomas Dwight, Charles E. Inches, George W. Gay; ophthalmic surgeon, William S. Dennett; physicians, J. Franklin Appell, Robert Disbrow, Reginald H. Fitz, Josiah L. Hale, William H. Baker, Orlando W. Doe, Joseph P. Oliver, A. L. Mason, Allen M. Sumner, Frederick W. Vogel, William C. Holyoke, Elbridge G. Cutter, George B. Shattuck, Robert M. Lawrence, Walter Ela, John Dixwell; department for diseases of the nervous system, Samuel G. Webber, David F. Lincoln; department for diseases of the skin, Francis B. Greenough; district physicians, John B. Fulton, Thomas M. Rotch, Edward F. Hodges, James B. Ayer, Edward H. Bradford, Frederick C. Shattuck, Abner Post, William J. G. Fogg, Thomas G. Reed.

MEDICAL NOTES.

— In its account of the annual meeting of the French Association for the Advancement of Science, the *Archives générales de Médecine* for October, 1876, notices a report by M. Letiévant upon resection of the upper jaw with preservation of the sub-orbital nerve. He called attention to the views entertained by physiologists, particularly by Longet, that the sensitive fibres exert a nutritive influence upon the muscles. He also compared the results obtained in an operation for the removal of the upper jaw where the sub-orbital nerve was preserved with one in which the nerve was destroyed.

In an operation where the nerve was destroyed no unfavorable symptoms supervened, except a slight attack of erysipelas. The patient recovered with a slight œdema of the cheek, but having the normal cutaneous sensibility. Eight months afterwards there was but little power of movement in the upper lip, and the patient was unable to inflate his cheeks and not let the air escape. Electrization of the muscles through the skin did not produce any contraction, nor did plunging electric needles into the substance of the muscles accomplish anything more.

In another case, where the sub-orbital nerve was preserved, its preservation was easy to accomplish, and scarcely increased the duration of the operation

when once the nerve had been laid bare and raised up. Three months after the operation all the muscles of the face contracted, sensibility, as shown by the aesthesiometer, was absolutely alike on both sides of the face. Pressure alone did not produce the same sensation, which could be explained by the destruction of the filaments of the anterior dental nerve. The recovery of the face was remarkable; cicatrization had taken place with a perfect preservation of the facial expression. Moreover, a fibrous mass had filled the cavity left by the removal of the superior maxilla.

The results of these two cases were totally unlike. While their comparison does not decide the physiological question, yet this ought to engage the attention of surgeons, with a view to establish the part which the sensitive nerve takes in the nutrition of muscular tissue.

— *The Lancet* of September 30, 1876, reports a case of popliteal aneurism, treated at St. Thomas's Hospital, in which recovery was brought about by the application of Esmarch's bandage for one hour, and of the tourniquet temporarily afterwards. The patient, a man aged thirty-two, on admission to the hospital had in the popliteal space a pulsating aneurismal tumor, two inches long, filling the upper half of the space, terminating opposite the junction of the femur with the tibia. There was also considerable œdema of the leg. On September 2d an Esmarch's bandage was applied tightly over the foot and leg up to the lower border of the popliteal space, carried lightly over the tumor, — a thin layer of cotton intervening, — and then continued tightly over the thigh to within three inches and a half of Poupart's ligament, where the upper end of the bandage was fixed with pins. The elastic ligature was not used. This was at two P. M. The bandage was left on for one hour, during which time the patient was very restless and complained of great pain. One third of a grain of morphia was given subcutaneously. At 2.55 P. M. a tourniquet was placed on the femoral artery, and Esmarch's bandage was removed. A second tourniquet was placed in position, to be applied alternately with the first. 4 P. M. No pulsation in tumor when the tourniquet was removed for a few moments. 5.45 P. M. Application of the tourniquet continued; no pulsation in tumor; leg slightly swollen; toes warm. 9.30 P. M. Until this time complete pressure had been kept up by tourniquets, but some flow of blood was now permitted. At 8.45 A. M. on the 3d, when all pressure was taken off, no pulsation was felt in the tumor. Tourniquet still applied lightly. At twelve, noon, there was no pulsation in the tumor, but the artery on the inner condyle pulsated. At seven P. M. the tourniquet was taken off. Aneurism cured. On the 10th the aneurism remained only a solid lump in the popliteal space, and over each condyle was a rather large artery pulsating very freely. The foot was not swollen, and the man was free from pain.

— *The Lancet* says that "the International Medical Congress at Philadelphia has proved a success far beyond the expectations of its most sanguine promoters, and deserves, therefore, a far fuller notice in our columns than space will permit.

"The cosmopolitan character of the representation at the congress testified better than words could express the world-wide interest which it excited. Disputes, so common in medical societies, were conspicuous by their absence

in the deliberations of this organization, whose very constitution was such as to insure its members being above the display of any petty jealousy. The most critical would have found it difficult to take exception to the excellent taste and hearty good-fellowship manifested in the address of welcome by Prof. Samuel D. Gross, M. D., D. C. L. Oxon.

"The address on medicine contained many facts of great historical interest, and whilst Professor Flint paid flattering tribute to the high place British medical literature had taken, he did not fail to do ample justice to the part played by America in the progress of medicine during the past century.

"The address on Hygiene and Preventive Medicine was delivered by Dr. H. I. Bowditch, who limited the age of progress in this department of medicine to the days subsequent to 1868. The orator awarded the palm to England, and, quoting the replies received to interrogatories, eliciting the present condition of sanitary progress, addressed to one hundred and sixty-seven men of intelligence, residing in thirty-eight States and nine Territories, and extending over twenty-five degrees of latitude and forty-seven of longitude, showed how very generally the importance of sanitary medicine is understood in the United States, and how indifferent both the local and central governing bodies are to the obligations it should impose upon them. The annual deaths in the United States of America from preventable disease were estimated at two hundred thousand. The importance of Dr. Bowditch's communication was so appreciated by the congress that a resolution was passed ordering that a copy be furnished to the governors of the various States, for transmission to the legislatures. A similar course was authorized with regard to the Provinces and government of Canada.

"The addresses on Medical Biography, Obstetrics, Medical Literature, and on Medical Education must have been highly gratifying to the national vanity, and on the occasion of the centennial anniversary were perhaps natural, though it is probable that, had the opportunity offered, most of the foreign delegates would have elected to spend the time occupied in hearing these addresses, which they could read subsequently, in the practical work of the sections, or even in visiting the Centennial Exhibition."

MASSACHUSETTS GENERAL HOSPITAL.

SURGICAL CASES OF DR. WARREN.

Cavernous Angioma of Lip. — July 26th, E. M., five years of age, came to the out-patient department, with a symmetrical oval swelling of the upper lip about the size of a small hen's egg. It was soft and fluctuating; the integuments were normal in appearance. It had existed for two years, and had been increasing steadily in size during that time. It had been operated upon once previously by acupressure. The patient was etherized, and the structure was burned with the galvano-cautery on the inside of the lip. To apply the cautery more effectually the hole made by the platinum point was enlarged laterally with scissors, and the whole interior of the growth burned with the platinum button. Some oozing remained, which was controlled by a small piece of sponge saturated with perchloride of iron, and pressure.

There was no pain or hæmorrhage following the operation; at the end of a week the wound was found filled with exuberant granulation, and a few days later an inspection of the lip revealed the presence of newly developed erectile tissue in the wound.

On August 6th, a brisk hæmorrhage occurring, the patient was again etherized, and the growth was tied in various directions by several double ligatures, inserted by long curved needles.

A week later a granulating mass appeared, shooting from the centre of one knot, and increased rapidly in size. This mass and an adjacent portion of tissue were carefully tied as before.

Ten days later the ligatures had come away and no return of the disease had taken place. The patient was discharged on September 3d, cured, and with little or no deformity of the lip, although so extensive an amount of tissue had been destroyed by the ligature and cautery.

Lipoma. — J. P., aged forty, entered the hospital August 12th, with a large pediculated tumor hanging from the right hip, the pedicle or fold of skin sustaining it being situated in the neighborhood of the sciatic notch. It was about the size of a baby's head, but had been considerably larger, according to patient's statement, previous to a severe hæmorrhage the week before. At that time, when the patient stood erect the tumor reached nearly to the knee. It was of fifteen years' duration, and no inconvenience had been experienced from it except at the time of the occurrence mentioned, although the patient had been engaged in active household duties.

To the feel the tumor was tolerably soft and slightly lobulated. At its most dependent portion was a small, round ulcer, and the skin about this was reddened and adherent to the parts below. The pedicle was tough and thickened, which fact suggested a deep attachment of the growth. This proved, however, not to be the case, as the tumor was easily removed under ether, by a few sweeps of the knife, two semi-elliptical incisions being made through the skin, around the pedicle, to save sufficient integument. The wound united partly by first intention and partly by granulation, and the patient left the hospital a few weeks after the operation.

Neuroma of Musculo-Spiral Nerve. — The patient, a middle-aged negress, had noticed for many years a small bunch on the outer aspect of the arm, a little above the elbow. It had always been tender on pressure, and occasionally pained her sufficiently to prevent her from attending properly to household duties. Had never received any blow on this spot to her knowledge, although, when a slave, had been whipped frequently. In her childhood she had had a fracture of the humerus, no evidence of which now remained. During the last few weeks the lump had been unusually painful and excessively so to the touch. The pain was entirely local, not extending along the course of the nerve. Local applications failing to give relief, the patient desired its removal. The patient being etherized, a vertical incision through the skin and muscles exposed a white, oval tumor, about the size and appearance of a pigeon's egg, apparently surrounding the nerve, which, however, was found to be merely flattened out on the lower surface of the growth, and was attached to it by a thin sheath of connective tissue surrounding both. The tumor was

readily separated from the nerve, about two inches of which had been laid bare by the operation.

The edges of the wound were brought together by sutures, and the arm placed in an internal angular splint. The wound healed almost by first intention, and in two weeks' time the patient was about her work again, using her arm with much greater freedom than before. A microscopic examination of the growth showed it to be a fibroma, which had been softened somewhat at the centre by recent inflammation.

"*Noli me Tangere.*" — Luther R., about sixty years old, entered the hospital June 21st. From his statement it seemed that one year ago a small wart appeared over his right malar bone. There was but little inconvenience experienced, yet the wart slowly increased in size, scabbing over and spreading along the edges, so that at the end of three months it was about as large as a silver half-dollar. The patient then began to seek advice, going, as he said, from one quack to another, and finally falling into the hands of a barber, about six months ago, who spent an entire day removing scabs and applying some kind of caustic to the exposed raw surface.

From that time the disease advanced rapidly, and has been attended with considerable pain. Now the inner portion of the right orbit is the seat of a deep and ragged ulcer, in some places two and one half inches in diameter; both lids are diseased, although on separating them the globe of the eye is seen to be uninjured and sight exists. The edge of the ulcer then runs along the eyebrow, down the middle of the nose, across the upper lip, to the outer side of the malar bone. The edges are red, indurated, and ragged, and the whole surface is covered with a cheesy, foul-smelling pus.

Over the right condyle of the jaw there are swollen and sensitive glands. The patient was in a very cachectic condition. Whilst under observation the disease seemed to be slowly advancing toward the left eye.

June 29th. The patient was suddenly taken with a series of chills, followed by a wild delirium, and died the following day.

The autopsy, performed by Dr. Fitz, twenty-one hours after death, showed that "the disease had extended through the right orbital plate in the pituitary fossa.

"The dura here formed part of the base of the ulcer. The inner surface of the dura showed recent false membrane, moderate in amount.

"The brain substance in general presented nothing unusual."

Fragments of the edge of the ulcer, examined under the microscope, showed the disease to be a large-cell epithelioma, similar to the variety found on the lip and penis. The disease had probably begun as a small-cell epithelioma or rodent ulcer, and had been stimulated by irritating applications into a more active cell growth. The occasional change from the less to the more malignant forms is noticed by Billroth and other observers, and is corroborative evidence of the malignant character of rodent ulcer.

LETTER FROM BERLIN.

MESSRS. EDITORS, — While on a pedestrian tour among some old Prussian towns, whose history is the political history of the Altmark of Brandenburg in the twelfth and thirteenth centuries, I found in the *Magdeburger Zeitung* of the 13th inst. items of medical interest from Halle, of which the following is a summary: Several new additions are to be made to the medical department of the university, namely, surgical, obstetric, medical, eye, and ear clinical buildings, and separate buildings devoted to anatomy, physiology, and pathology. All the clinics will be built on the pavilion plan, of which the surgical will be first erected; the directors' building is to be in the obstetric clinic. Professor Volkmann's surgical institute will be of stone, to which four pavilions are to be attached. In the main structure will be rooms for assistant physicians, nurses, and steward; also waiting-rooms, wards, and the operating theatre. The latter will be in the parterre, built out from the main building and raised, giving it every possible opportunity of light and air. A carriage is to run on rails to it from wards on the same floor, for transportation of patients. Each pavilion of the surgical institute is to have twenty-four beds and will represent a ward (*kranken-saal*); it will rest on columns one metre high (about forty inches), giving it complete ventilation. The different clinics are to be isolated, with intervening parks. Walks of asphalt and granite will run to and between the buildings. For the transportation of provisions from the kitchen through the parks to the different clinics dog-wagons are to be employed, the fore and side walls of which are to be lined with hot-water pipes. The plan contemplates a completion of all the structures by the end of 1877.

The University of Halle was founded in 1694; its present buildings were erected in 1834; Wittenberg joined it in 1817. It is known as one of the smaller universities of Germany, as is that at Göttingen, but probably no other two have a greater repute for sound learning. Its library numbers two hundred thousand volumes. When the commercial relations of Halle, which have lately assumed some consideration, are not estimated, it will be readily seen that, in a city of fifty thousand inhabitants a university with eight hundred students, and with such a wealth in prestige, books, and money is the chief element in society. Halle will continue to be what it has been for two hundred years — an old university town, with all that that good English phrase implies. The "pietistic" notions, which it aimed to teach in the last century, are now not current, and its halls are more open to the foreign student in consequence. The multitude of American colleges in the heart of thriving business localities, dependent for life on private bounty, students' fees, and the poor economy of doing without apparatus and books, suggest to the medical essayist, by contrast with the Universities of Halle and Göttingen, a topic of profitable study, namely, Should the general government aid in the support of the higher institutions of learning, and, if so, how far should it pretend to their management, and at the same time take them out of the control of local influences and make them national?

On the 2d inst. the educational institutes for military physicians held their annual celebration. Germany has two schools of military medicine and sur-

gery, if the expression may be used with reference to the ultimate end of such instruction rather than to any intrinsic difference in the studies. These are the medico-surgical Friedrich-Wilhelms-Institut, founded by Frederick William the Third, and the medico-surgical military academy, whose courses of study are in preparation for the *sanitäts-officierscorps*.

The supervision of the reception of students is in the hands of the general staff physician of the German army, Dr. Grimm. The following technical points will interest two classes of your readers: those who are looking to positions in the military medical service, and those who are anxious for the better treatment of the army and navy medical corps at the hands of the general government.

Students in both these schools receive free instruction; the government assures in addition, in the Friedrich-Wilhelms-Institut, a free residence and thirty marks a month (a mark is equal to an American quarter of a dollar in gold); in the academy one hundred and eighty marks a year without a residence; on the other hand, the father or guardian must furnish clothing and books, and, in addition, if the student is in the institut, thirty marks a month; if in the academy, seventy-five. Besides, the father or guardian must promise to furnish two hundred and forty-five marks towards paying the expenses of the state's examination, and seventy-five more to equip the young man as a one year's volunteer (*freiwilliger*). At the end of a course of four years' study the students of both schools are put into the army with a competence as *unterarzt*, or under physician, a position of a probationary character, and not equal to that of assisting physician. After this the students of the institut are obliged to serve eight years as active military physicians, including the one year as *freiwilliger*, while those of the academy give four years of active service as military physicians.

It is easy to imagine, because every healthy German citizen is required, since 1870, to be a soldier for a definite length of time, that promotion is rapid. With the medical service such is, indeed, not the case. The government invites young men to the medical department of the army by a species of selection which tends to make this arm of the service aristocratic. Only those young men are eligible to a military medical education who are residents of the states of the German Confederation (Bavaria, however, is excepted, and claims none of the privileges of the confederation in this regard, on account of its peculiar military rights); they must prove their legitimacy of birth; must not be over twenty-one years of age; must possess a certificate of preparation for university studies from a German gymnasium of the humanistic type; or, more definitely, must satisfy the government of their having pursued the studies of the highest class of such gymnasium a full year. A parent or guardian is at liberty to choose either institute for his protégé, but with the distinct understanding that he must place the young man in the academy in case it becomes impossible for him to enter the Friedrich-Wilhelms-Institut. The general staff physician of the army reserves to himself, however, the decision of his assignment in the event of any question as to what would subserve the interests of the government. These two military schools held their year's celebration on the 2d inst., which was attended by an array of medical

celebrities in uniform and frock, among whom were Professors Virchow, Langenbeck, Bardeleben, Helmholtz, and Hoffmann; several generals of the army were among the invited guests. The festivities were opened by a choir of students, who gave a *salvum fac regem* as German students know how to do. Then Professor Bardeleben gave the address of the occasion upon a retrospect of the progress of surgery in the second half of the nineteenth century, of which the following is a summary. The chemist, Jackson, discovered ether as an anæsthetic; ophthalmology became a special science, and the ophthalmoscope found its use in laryngoscopy; medicine has become more surgical. Security rather than rapidity of procedure has become a fundamental principle of surgical operations. Invention has successfully found its way to methods of blood-saving in operations and treatment. Middeldorpf brought out the galvanocautery as a destructive agent; at the same time Pravaz, of Lyons, introduced the subcutaneous injection of medicines. Compression of arteries by the screw or tourniquet, by weights, and by the fingers; the quiet position and retention of wounds, secured by stiff paste bandages, gutta serena, and gypsum, as an element in the healing process; their use as immobile dressings in fractures, the invention of which was credited to a military physician of Holland, though Dieffenbach, of Berlin, had already used them on the club-feet of children for overcoming deformity; permanent extension for restoration of form and position of a part; and antiseptic agents. These were the chief advances in surgery of the latter part of this century, as detailed by the speaker. Under the head of infection, the question was touched upon, how far moisture and air, alone or conjointly, help or retard the healing of wounds. Bardeleben regarded it as by no means conclusively settled, and disposed of it by calling it a question for the future. With more confidence, deduced from a large and successful clinical experience, and with equal conservatism, he believes that the future of surgery depends upon antiseptic methods of treatment. He paid a high tribute to the so-called "American barracks," or what we know as the "pavilion hospital," saying, among other things, that it was the ideal of a sick-room. Two years ago Professor Virchow, in his anniversary address on the same occasion, of which the subject was diseases propagated by vibriones, micrococci, etc., — infusoria known by the general name bacteria, — said of the American war of 1861, that however great the loss of life by sickness may have been, and it was proportionally very great, no country had left to military medicine such undying monuments of scientific achievements in hygiene, hospital construction, and the transportation of the sick and wounded. Let me add, in this connection, the voluntary testimony of one of the surgeons, in active service, to the Kaiser-Alexander-Garde-Grenadier-Regiment, a Prussian regiment named after its honorary chief, the Emperor of Russia. In private conversation with me, he said that it was in contemplation to build all the new military local hospitals on the American plan of the field hospital, and that several had already been erected for the Berlin garrison.

Bardeleben is about fifty years of age. His title is Geheim-Medicinal-Rath Prof. Dr., which will translate itself etymologically into Privy Medical Councillor. I dare not venture further with the comparison, appreciating the doubtful success of any American in elaborating the titular language of the Ger-

man court. Langenbeck's title is the same, only more so; that is, between its first two words should be written Ober, with a hyphen following. He is surgeon to the emperor and several members of the royal family. Bardeleben began his career as a teacher of clinical surgery. On the 3d inst. he was proclaimed rector of the university for the year beginning October 16, 1876.

In accordance with a law of all German universities, which prescribes the annual election of a university rector and dean in each of the four faculties of philosophy, theology, medicine, and law, Virchow was made dean of the medical faculty for the next year.

On account of the short summer semester, and the habit of the different departments to close the lectures with July instead of with the middle of August, the Minister of Public Education and Ecclesiastical Affairs issued a note to the effect that lectures should be given through the first week of August. As, however, students must pay a full month's rent for rooms used within that time, the audiences were very small, and in some instances in the law faculty the audience consisted of one student.

The renowned von Graefe is to be honored with a statue, which will stand on the Platz before the Charité. The committee in charge of the matter lately held a meeting in consultation, which was attended by the ophthalmologists of Berlin.

Yours truly,

MED.

BERLIN, PRUSSIA, August 26, 1876.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING OCTOBER 14, 1876.

	Estimated Population, July 1, 1876.	Total Mortality for the Week.	Annual Death-Rate per 1000 for the Week.	Death-Rate for the Year 1875.
New York	1,061,244	450	22.05	29.35
Philadelphia	825,594	310	19.52	22.24
Brooklyn .	506,233			24.92
Chicago . .	420,000	155	19.19	19.75
Boston . .	352,758	160	23.59	26.20
Providence	101,500			19.02
Worcester .	51,087	18	18.32	20.91
Lowell . .	51,639	25	25.37	20.55
Cambridge	49,670	18	18.85	23.31
Fall River	50,372	12	12.39	23.99
Lawrence .	36,240	11	15.78	25.96
Lynn . .	33,548			19.23
Springfield	32,000	8	13.00	20.93
Salem . .	26,344	13	25.66	22.92

Normal Death-Rate, 17 per 1000.

SUFFOLK DISTRICT MEDICAL SOCIETY.— The stated meeting will be held at the rooms, 36 Temple Place, on Saturday evening, October 28th, at seven and a half o'clock. The following papers and cases will be read: Dr. G. W. Gay, Dermoid Cyst. Dr. J. Homans, Ligature of both Femorals for Double Popliteal Aneurism; Recovery. Dr. H. O. Marcy will exhibit a new splint.

A. L. MASON, Secretary.

WE learn that William R. Warner & Co. have received the centennial award for their soluble sugar-coated pills. This is the third grand world's fair prize that attests to their excellence at home and abroad.